

Figure 4

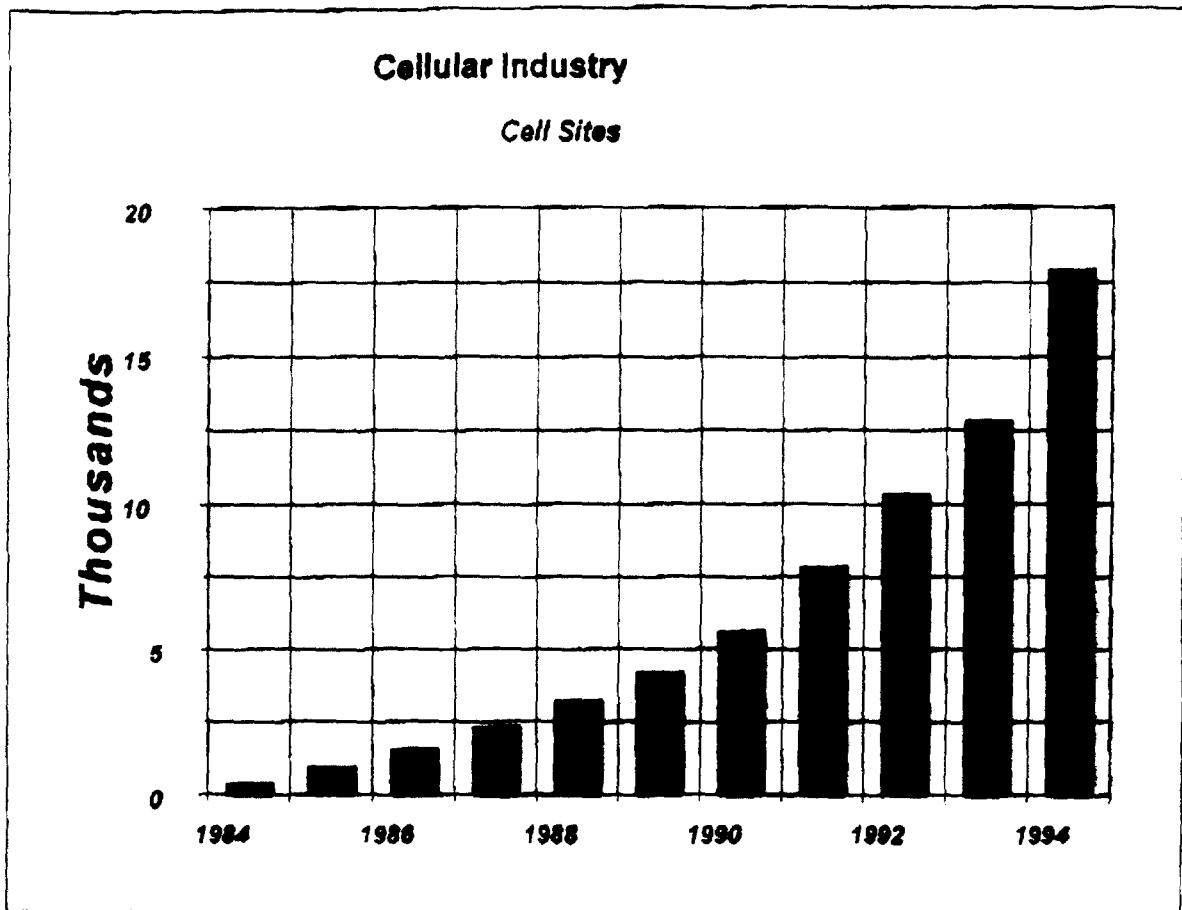


Figure 5

This picture stands in stark contrast to the early predictions about how fast cellular service would grow. For example, Vice President Gore has pointed out that before AT&T sold the first cellular phone, it predicted that there would be 900,000 of them by the year 2000.²⁵ Actual cellular growth, of course, has vastly exceeded the predictions made when the service started.

Investment in wireless has also grown remarkably. In the year from December 1993 to December 1994, capital investment grew from a little under \$14 billion (cumulative) to reach nearly \$19 billion, an increase of 36 percent. The number of cell sites grew during the same period from 12,805 to 17,920, an increase of 40 percent.

B. PCS

The same observations apply to the nascent PCS industry. PCS shows every sign of following cellular's meteoric growth pattern.²⁶ The Commission's MTA auctions for broadband PCS spectrum produced winning bids of nearly \$8 billion, including the pioneer's preference revenues. This demonstrates that investors are very serious about deploying PCS. The earliest PCS provider to market is Sprint Spectrum, serving the Washington/Baltimore area. It is operating one of the three pioneer's preference licenses that were issued before the licenses for the rest of the country were auctioned. It began service only a few months ago. It offers digital service, bundled with paging, voice mail, caller ID, text messaging, and many other features. Sprint Spectrum offers prices slightly lower than typical cellular prices. For example, it offers a package for \$15 per month that includes 15 minutes of usage and additional minutes at \$0.31 per minute. It offers a variety of other packages that range up to \$150 per month, with 600 minutes included, and additional minutes priced at \$0.25 during peak hours and \$0.10 off-peak. Its early experience in the Washington market may well prove telling for the rest of the PCS providers. One of Sprint Spectrum's sales people reported to one of our colleagues that the company has already activated more than 45,000 phones, surpassing its business plan budget.

²⁵ Remarks by Vice President Al Gore at National Press Club, Dec. 21, 1993. Internet URL: <<http://www.hpcc.gov/white-house/gore.nii.html>>.

²⁶ See, e.g., Mark Landler at D1 (Sprint, TCI, Cox and Comcast spent \$2.1 billion on PCS licenses, and are spending \$2 billion more to build a national network capable of reaching 144 million people); see also, Edmund L. Andrews, "In Auctions of Airwaves, The Sky Seems to Be the Limit," *New York Times* (Feb. 26, 1996), at D1 (bidding for "C" Block PCS licenses has reached \$6.97 billion, with no end in sight).

C. Additional Capacity

The startup of new PCS providers and the deployment of digital capability in cellular networks will substantially increase the amount of wireless capacity available to serve customers. The addition of new providers will change market structure and should increase rivalry in the industry. Over the long term, these developments should lower wireless prices and transform the industry, making wireless service a much closer substitute to wireline service. Scarcity rents and (possibly) monopoly rents can be expected to decrease as markups fall. In the long term, therefore, any reductions in LEC interconnection charges are much more likely to flow through to customers than they would in today's environment.

We emphasize that these changes in market structure will take place over the long term. Some of the PCS auctions have not yet even taken place. Systems will take time to build. Once they are operational, they will probably grow rapidly. However, their growth, like cellular's, will be limited by organizational constraints. As wireless prices decline, interconnection charges will be a greater share of a wireless carrier's cost structure than they are today. At that time, reductions in LEC interconnection charges can be expected to further stimulate the penetration and use of wireless services, thereby making it a closer substitute for wireline service.

D. The Cellular Industry Does Not Use Bill-and-Keep for Intra-industry Interconnection

Bill-and-keep is not even the conventional practice within the cellular industry. When a subscriber from one cellular system travels to another area and desires interconnection and service from that cellular system, his home cellular system typically is billed a roamer surcharge. In these cases, at least, cellular carriers do not use bill-and-keep for interconnection. They do not handle other systems' roamers in return for those systems handling their roamers in turn.

Roamer revenue is a large piece of total cellular revenue. In 1994, roamer revenues (which include usage charges on roamer calls in addition to roamer surcharges) were more than \$1.8 billion, compared with total cellular revenues of more than \$14.2 billion, meaning that roamer revenues were 12.9 percent of total. Roamer revenues have been growing somewhat faster than total cellular revenues. In 1992 and 1993, roamer revenues were 12.4 and 12.5 percent of total revenues, respec-

tively.²⁷ Even though roamer revenues include more than roamer surcharges, roamer surcharges appear comparable in magnitude to LEC interconnection charges.

CMRS providers thus advocate that the Commission adopt a compensation scheme that they do not use themselves. They have consistently eschewed bill-and-keep when dealing with one another. In the present context, however, CMRS providers are highly motivated by the prospect of a regulatory giveaway that will enrich them at the expense of telephone ratepayers.

E. CMRS Interconnection as Part of a Broad-based Interconnection Policy

In view of the spectacular growth rate of wireless service in the U.S. and the evolving market structure, there is no need for haste in changing existing interconnection arrangements or no apparent basis for substituting regulatory fiat for negotiated agreements between the parties. The Commission should not panic and rush into a bad interim plan for LEC-CMRS interconnection. In the meantime, the Commission and the industry have plenty of time to evaluate LEC-CMRS interconnection issues in the context of the broader consideration of the appropriate interconnection arrangements between competing networks. The physical interconnections required to terminate CMRS calls, long-distance calls, and local calls coming from other networks are virtually identical. Consequently, a common structure of interconnection charges and arrangements for both wireline and wireless providers should be established in the long term. The Commission's proposed interim plan of bill-and-keep would compromise that long-term objective.

It is yet another irony that the Commission's proposed interim plan of bill-and-keep would actually serve to undermine the development of facilities-based alternatives to LEC networks for

²⁷ CTIA, *Wireless Factbook* (Spring 1995), at 8, 12.

providing CMRS interconnection.²⁸ Setting the LEC interconnection price at zero removes the incentive for CAPs, competitive LECs or cable companies to enter that market.²⁹

²⁸ For example, MFS has petitioned the Commission to be allowed to provide CMRS interconnection through expanded interconnection with LECs. See Federal Communications Commission, *In the Matter of Expanded Interconnection with Local Telephone Company Facilities*, CC Docket 91-141, MFS Communications Company, Inc., Petition for Declaratory Ruling that Interconnector Access to LEC Services May Not Be Restricted, December 4, 1995.

²⁹ The Commission acknowledged this itself. Notice, at para. 10.

VII. Saddling the States with the Problem of Lost Revenues

As we have noted previously, the Commission's proposal for bill-and-keep as an interim compensation arrangement will result in a loss of between \$800 million to \$1.1 billion in annual revenues for the LECs. We have also noted that this amounts to between \$0.43 and \$0.58 per subscriber per month. The Commission has proposed this radical step without offering any compensatory adjustments. Nevertheless, the Commission's Notice chooses to ignore this problem. In this sense, the FCC is simply shifting the burden to state regulators in what amounts to nothing more than another "unfunded federal mandate."

This outcome would be ironic, because LEC-CMRS interconnection prices, terms, and conditions have long been handled as contractual matters between the parties. Many of these have been subject to state commission oversight. The process seems to be working.³⁰ The process of negotiation and state mediation and oversight is just the process that Congress recently mandated for interconnection arrangements generally.³¹ There appears to be no compelling reason for the Commission to ignore Congress' preferred approach in the one area where it currently is working.

³⁰ The Commission even acknowledges that those involved in the current process feel it is working. Notice, at para. 83.

³¹ Sec. 252 of the Telecommunications Act of 1996.

Data Sources and Calculations

CTIA estimates that CMRS providers paid more than \$800 million to LECs in 1994 to terminate calls to LEC subscribers.¹ We agree that the magnitude of charges being paid is at least that amount. Based on data available from the Commerce Department, combined with CTIA's information, we estimate that CMRS providers paid approximately \$1.1 billion in 1994 for access charges, which would mostly consist of interconnection charges paid to LECs to terminate calls from CMRS subscribers to LEC subscribers. We show in this appendix how we obtained this estimate.

The table below displays the data we used and indicates the source of each item or else the calculation we performed.

¹ CTIA, *Fact Sheet Reciprocal Termination*, accompanying press release statement by Thomas E. Wheeler, President, CTIA (Dec. 15, 1995).

	Data	Source
A. Total cellular industry revenues, 1994	\$14.2 billion	CTIA Wireless Factbook.
B. Total operating revenues, telephone communications (SIC 481), 1993	\$177.843 billion	U.S. Department of Commerce, Bureau of the Census, <i>Annual Survey of Communications Services: 1993</i> , at 6.
C. Total operating revenues, telephone communications, except radiotelephone (SIC 4813), 1993	\$172.579 billion	U.S. Department of Commerce, Bureau of the Census, <i>Annual Survey of Communications Services: 1993</i> , at 7.
D. Total operating revenues, radiotelephone communications (SIC 4812), 1993 ²	\$5.264 billion	U.S. Department of Commerce, Bureau of the Census, <i>Annual Survey of Communications Services: 1993</i> , at 2; also [B - C].
E. Interconnection charges, telephone communications (SIC 481), 1993	\$26.121 billion	U.S. Department of Commerce, Bureau of the Census, <i>Annual Survey of Communications Services: 1993</i> , at 6.
F. Interconnection charges, telephone communications, except radiotelephone (SIC 4813), 1993	\$25.708 billion	U.S. Department of Commerce, Bureau of the Census, <i>Annual Survey of Communications Services: 1993</i> , at 7.
G. Interconnection charges, radiotelephone communications (SIC 4812)	\$0.413 billion	[E - F]
H. Percentage of cellular revenues paid as interconnection charges	8 percent	[G / D]
I. Total cellular interconnection charges, 1994	\$1.1 billion	[A * H]
J. Interconnection charges, per-minute	\$0.03 per-minute	CTIA press release (Dec. 15, 1996).
K. Cellular usage charges, per-minute	\$0.375 per-minute	[J / H]

² This does not include the cellular revenues of firms whose primary business focus is not radiotelephone communications, which would be the case for most LECs. Nevertheless, the proportion of interconnection charges to total revenues of the cellular firms included in this category should still apply broadly to the industry in general.

Attachment: Sprint Spectrum[™] Pricing Guide

Sprint Spectrum Service Plans Include:

Free Airtime – All service plans have airtime included at no extra charge. So you can make calls when you want to without worry.

No Contract – Unlike cellular, Sprint Spectrum does not require that you sign a long-term contract.

Built-In Answering Machine – With your handset's built-in answering machine, you can stay in touch even if you can't answer your phone, or if it's busy or turned off. The answering machine automatically answers these calls, takes messages for you and saves them until you have time to listen to them.

Built-In Numeric Paging – Every handset includes built-in numeric paging at no extra charge. Callers can leave a phone number for you to call when you want to.

Built-In Caller ID – Every handset includes Caller ID at no extra charge. So you'll see the number of the person who is calling you before you answer. If you choose not to answer, the caller can leave you a message or a page.

Free Minute for Incoming Calls – The first minute of incoming calls is free – so you can give out your number and not worry about paying for calls you don't want to receive.

Great Rates on Sprint Long Distance – With Sprint Spectrum you get your choice of two great Sprint long-distance plans. Just tell Customer Care (when you sign up for service) whether you'd prefer Sprint Sense™, which gives you 22¢ per minute peak and 10¢ per minute off-peak, or "flat rate" pricing of 15¢ per minute, anytime – day or night.

Choose Your Number – In order to make your number easy to remember, Customer Care will try to match the last four digits of your number to those of your choice when you call to activate (subject to availability).

Choose Your Billing Cycle – You select the time of the month you want to receive your bill, so it arrives when you want it to.

Detailed Billing – Each invoice you receive is easy to read and will give you full detail of all call activity for the month.

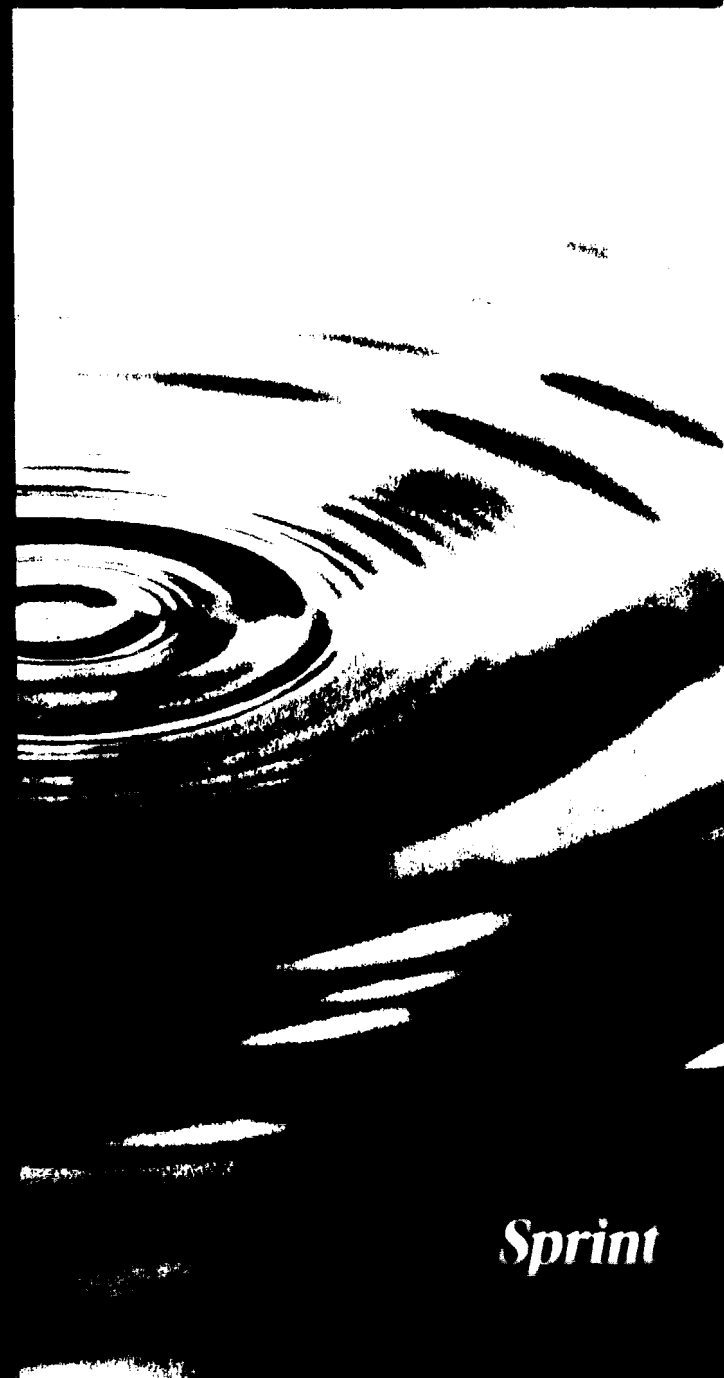
Handset Replacement Program – Handset replacement protection is included with all service plans, except Talk 15 and Talk 30, so you automatically protect your investment. Handset Replacement Program is available on Talk 15 and Talk 30 for \$4/month. Deductibles apply.

Customer Care Is Always There – Our friendly Customer Care Representatives are available 24 hours a day, seven days a week to help you. Call them to get answers to questions or change service plans. This call is always free – Dial 611 from your Sprint Spectrum handset or 1-800-311-4220 from any phone.

Call today for more information 1-800-311-4220

Sprint Spectrum

Pricing Guide



1-800-311-4220

Sprint Spectrum

Sprint

Select the Sprint Spectrum Service Plan That's Right for You

FEATURES INCLUDED	Monthly Package Price	\$15	\$25	\$40	\$60	\$90	\$150
	Anytime	15 minutes	30 minutes	—	—	—	—
	Peak (7AM - 9PM WEEKDAYS)	—	—	60 minutes	150 minutes	300 minutes	600 minutes
	Off-Peak (ALL OTHER TIMES)	—	—	60 minutes	150 minutes	300 minutes	600 minutes
	Peak (7AM - 9PM WEEKDAYS)	31¢	31¢	29¢	27¢	26¢	25¢
	Off-Peak (ALL OTHER TIMES)	31¢	10¢	10¢	10¢	10¢	10¢
	Answering Machine	Yes	Yes	Yes	Yes	Yes	Yes
	Numeric Paging	Yes	Yes	Yes	Yes	Yes	Yes
	Caller ID	Yes	Yes	Yes	Yes	Yes	Yes
	Call Waiting	Optional	Optional	Optional	Yes	Yes	Yes
	Handset Replacement Program	Optional	Optional	Yes	Yes	Yes	Yes

Whether you want Sprint Spectrum service to help manage your work or personal life, or as a safeguard for emergencies, you'll find that Sprint Spectrum does much more for you than today's cellular services for much less than cellular costs. Each service plan includes free airtime.

Talk 15 – The "Starter Package." What a great way to get to know Sprint Spectrum. It's the way to take advantage of the benefits Sprint Spectrum has to offer at the lowest possible monthly charge. For only \$15 per month you're on the network. And, unlike cellular starter packages, this one includes a full 15 minutes of anytime airtime, so you can talk when you want to – day or night, weekdays or weekends. Additional minutes are 31¢ per minute, anytime, day or night. Talk 15 also includes a built-in answering machine, numeric paging and Caller ID, so you're always "in touch."

Talk 30 – For only \$25 per month, you've got a plan that includes 30 minutes of anytime airtime, so you can talk when you want to – day or night, weekdays or weekends. Additional minutes are 31¢ per peak minute and only 10¢ per off-peak minute. Talk 30 also includes a built-in answering machine, numeric paging and Caller ID.

Talk 120 – This plan includes 60 minutes of peak airtime plus 60 minutes of off-peak. Additional minutes are 29¢ peak and 10¢ off-peak. Talk 120 includes a built-in answering machine, numeric paging and Caller ID. Plus, you are automatically protected with a Handset Replacement Program at no extra cost.

Talk 300 – This plan includes 150 minutes of peak time and 150 minutes of off-peak. Additional minutes cost only 27¢ peak and 10¢ off-peak. Talk 300 includes a built-in answering machine and numeric paging, Caller ID and Call Waiting at no charge. Plus, you are automatically protected with a Handset Replacement Program at no extra cost.

Talk 600 – This is the perfect plan for frequent talkers. It includes 300 peak and 300 off-peak minutes, so it is easy to be in touch when you need to. Additional minutes are only 26¢ peak and 10¢ off-peak. Talk 600 includes a built-in answering machine and numeric paging, Caller ID and Call Waiting at no extra charge. Plus, you are automatically protected with a Handset Replacement Program at no extra cost.

Talk 1200 – This is the perfect choice for people who make and receive lots of calls. As the top-of-the-line plan, it includes a whopping 600 minutes of peak time and 600 minutes of off-peak. Should you need additional minutes, they are priced at our absolute lowest rate – only 25¢ peak and 10¢ off-peak. Talk 1200 includes a built-in answering machine, numeric paging, Caller ID and Call Waiting at no extra charge. Plus, you are automatically protected with a Handset Replacement Program at no extra cost.

Corporate Service Plans – Available for accounts with five or more subscribers. Call 1-800-311-4220 for more information.

All rates and policies are subject to change with reasonable advance notice.

SPRINT SPECTRUM ADDITIONAL SERVICES	
Directory Assistance with Call Completion (Dial 411)	50¢/call
On-Demand Information Services Traffic, News, Financial News, Sports, Weather, Horoscope, Lottery (Dial *INFO)	50¢/minute
Landline Connection Charge For completed local landline calls	10¢/call

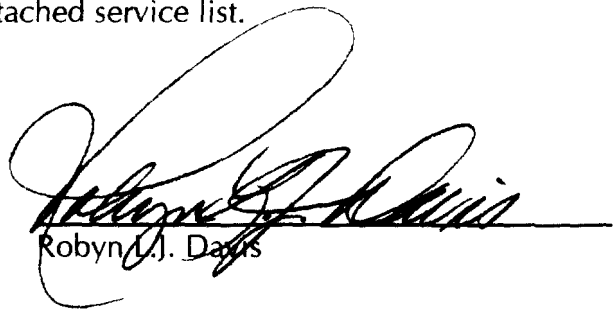
Sprint Spectrum Optional Features:
Call Customer Care to Activate

INFORMATION SERVICES	
Daily Handset Delivered Services Sports, Weather, Horoscope, Lottery	\$6/month
Twice Daily Handset Delivered Services Traffic, News, Financial News	\$12/month
Financial Portfolio Custom Stock Tracking Delivered Services (Call for Details)	\$25/month

VOICEMAIL SERVICES	
Voicemail	\$2/month
Call Waiting (Talk 15, Talk 30 and Talk 120)	\$2/month
Call Forwarding	\$2/month
Convenience Package Voicemail, Call Waiting, Call Forwarding	\$5/month
Call Barring	\$5/month
Handset Replacement Program (Talk 15 and Talk 30)	\$4/month
Text Messaging Includes 100 PC or handset-generated messages	\$10/month
Additional messages	10¢/message
Operator assisted messages	50¢/message

CERTIFICATE OF SERVICE

I, Robyn L.J. Davis, do certify that on March 4, 1996 comments of the United States Telephone Association were either hand-delivered, or deposited in the U.S. Mail, first-class, postage prepaid to the persons on the attached service list.



Robyn L.J. Davis